

- 13 -

Claims

1. Axial piston compressor with a drive shaft (12) for a disc (14) that is mounted on the drive shaft in such a way that it can be tilted relative to the drive shaft about a pivotal axis (C), and at least one piston (18), wherein the pivotal axis (C) of the disc (14) is disposed eccentrically with respect to the mid-plane of the disc, characterized in that the piston (18) is provided with at least two sliding blocks (20) that move along the disc (14) on a slideway, arranged such that the piston (18) encloses the sliding blocks (20) in a C-shaped structure, and that the position of the pivotal axis (C) relative to the mid-plane of the disc is on the side that faces the the piston (18), so that the disc (14) can be moved relative to the sliding blocks (20) in such a way that the slideway of the sliding blocks projects beyond the the edge of the disc only slightly or not at all.
2. Axial piston compressor according to Claim 1, characterized in that the disc is a swash plate (14), which can be set into rotation by the drive shaft (12) and can be adjusted to various tilt angles (α) with respect to the drive shaft.
- 25 *Sub 22* 3. Axial piston compressor according to Claim 1 or 2, characterized in that the disc is a wobble plate that is rotatably mounted on a swash plate and is set at a tilt angle with respect to the drive shaft that corresponds to the angle of the swash plate.

4. Axial piston compressor according to one of the preceding claims,
characterized in that, given a distance of 30 mm between the long axis (L) of the drive shaft and the long axis (Z) of the piston, an 8-mm diameter of the flat surface (22) of the sliding blocks (20), which is apposed to the slideway, and a maximal tilt angle (α) of 18° between the long axis of the drive shaft and the central axis of the disc, the distance between the mid-plane of the disc and the pivotal axis of the disc (14) is no greater than about 1 mm.

10

5